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**SANDIA NATIONAL LABORATORIES
WASTE ISOLATION PILOT PLANT
TECHNICAL OPERATION PROCEDURE (TOP)
TOP 558**

DATA HANDLING AND OPERATION PROCEDURE FOR THE AIS-RMD DAS

Revision 0

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1. **Introduction**
The AIS-RMD system is a Data Acquisition System (DAS) designed by Sandia National Laboratories (SNL) for the acquisition of data from the experiments in the Air Intake Shaft (AIS) and Room D. The system has been verified according to Quality Action Procedure (QAP) 19-1. The verification package for the system, AIS-RMD version 1.0, is available in the Sandia Waste Isolation Plant (WIPP) Central File (SWCF). The verification package contains all of the documentation associated with the AIS-RMD program verification including the users manual. Refer to the verification package for more details about AIS-RMD system.
2. **Purpose**
This Procedure will provide guidance for handling the data collected by the AIS-RMD DAS located inside the AIS shed in the underground at the WIPP site. It will also provide general direction for the operation of the system. If specific information is needed for the operation of the system refer to the AIS-RMD User's Manual.
3. **Responsibilities**
It is the responsibility of the personnel performing tasks associated with this procedure to be familiar with the User's Manual for AIS-RMD. It is also the responsibility of the personnel performing tasks associated with this procedure to be properly trained prior to working on the system and to contact the Sandia National Laboratories representative with any and all questions pertaining to this test.
4. **Safety**
All work will be done in accordance with the WIPP Safety Manual and any applicable Safe Operating Procedures (SOPs). Access to the underground will be in accordance with existing WIPP Site policies.
5. **Forms**
AIS-RMD Data Collection and Tracking Form (See page 6 of this procedure)
6. **Procedure**
 - 6.1. **Program Setup:**
 - 6.1.1. The AIS-RMD DAS system is configured to launch the AIS-RMD software during startup. If the computer is being operated in DOS mode press the <Ctrl><Alt><Delete> keys to perform a soft boot of the system. When the program has started the screen will display "THE SYSTEM DATE IS MM-DD-YYYY".
 - 6.1.2. Following the procedures in the AIS-RMD Users Manual enter the following information at the appropriate program prompts.
 - 6.1.3. The Scan Interval will be set to 240 minutes (6 scans per day).
 - 6.1.4. The Data File name will be the Month Day and Year that the file is started in the format of "MM-DD-YY" the program will automatically add an extension of .DAT. If the program finds a data file of the same name it will ask if the operator wants to append the data file.

NOTE: DO NOT append a data file unless directed to by the SNL Principal Investigator or the Principal Investigator's Representative

- 6.1.5. Always select to record data to the floppy drive unless directed not to by the SNL Principal Investigator or the Principal Investigator's Representative.
- 6.1.6. After the program has started the program will display a screen that looks similar to figure 1. Allow the system to collect 1 record to make sure it is operating correctly.
- 6.1.7. Prior to leaving the system in the collection mode turn off the monitor to prevent burn in and close the cabinet.

Date: 04-04-1996 Time: 12:55:57				
Data File: filename.dat		No. of Records: 1		
Present Time: 16095.53885	Next Scan Time: 16095.53955	Interval:	0.0006	
<F1> Force a Scan	<F3> Scan Interval	<F5> Activate Measurands	<F7> Measurand Checkout	<F9> STOP Program

Figure 1

6.2. Data Collection

- 6.2.1. Attain or create 3 Disk Labels as per the example in figure 2.
- 6.2.2. Turn on the monitor and copy the Data File Name Number of Records and System Time displayed on the screen in the appropriate lines on three disk labels and three Data Collection and Tracking Forms.
- 6.2.3. On the Data Collection and Tracking Forms record the calibration expiration dates from the Electronic Development Corporation 501 J Programmable Voltage Standard and the Hewlett Packard 3456A Multimeter.
- 6.2.4. Press <F9> and follow the prompts to stop the program.
- 6.2.5. Remove the data floppy disk from the system and place a label on the disk.
- 6.2.6. Circle System Data Disk on the label and the form.
- 6.2.7. Insert a blank floppy and use the MS/DOS© COPY or XCOPY command to copy the data file from the AIS-RMD system hard drive.
- 6.2.8. Repeat the preceding step to create a second backup disk.
- 6.2.9. Place a label on both floppy disks and enter the file name and circle Backup Data Disk 1 on one disk and circle Backup Data Disk 2 on the other disk.

- 6.2.10. Circle Backup Data Disk 1 on one Data Collection and Tracking Form and circle Backup Data Disk 2 on the other Data Collection and Tracking Form.
- 6.2.11. Complete the remainder of the Data Collection Forms.
- 6.2.12. Restart the AIS-RMD program in accordance with Program Setup section 6.1.

System Data Disk / Backup Data Disk: 1 or 2 Records Center Identifier No. _____ Nuclear Waste Project : WIPP Test/Activity: AIS-RMD Author _____ <i>Your Name</i> _____ Date Collected: _____ WBS# 1.1.03.6.1 File Name: _____ The data contained on this disk was collected using the AIS-RMD program Version 1.0.. The data is in an ASCII format and can be read by any computer capable of reading ASCII text. A description of the data format can be found in the AIS-RMD Verification plan

Figure 2

- 6.3. Transport Data:
 - 6.3.1. Package the System Disk, one Backup Disk and their Data Collection and Tracking Forms in a commercial disk mailer (type available in computer and stationary stores).
 - 6.3.2. Mail the package via US Mail to:

Sandia National Laboratories
ATTN.: *Enter the name of the SNL Principal Investigator or the Principal Investigator's Representative*
PO Box 5800
Albuquerque, NM 87185-1322
 - 6.3.3. Retain the second backup disk in a safe location for 6 months and then ship to the above address.
- 6.4. Verify data:
 - 6.4.1. Upon receipt of the data the SNL Principal Investigator or the Principal Investigator's Representative will check the files on the backup disk against the file on the System Data Disk to make sure the file was properly copied and did not get corrupted. This may be done using any number of commercially available programs designed to compare files such as Norton's Utilities.
 - 6.4.2. The actual data will be checked by the SNL Principal Investigator or the Principal Investigator's Representative in accordance with an applicable data analysis plan.

- 6.4.3. The System Data Disk and one of the Backup Data disks will then be placed in the SWCF in accordance with the current QAP guidelines.

7. QA Records

This TOP will generate the following as QA records:

- Floppy Disks Containing Data (2 copies to SWCF)
- AIS-RMD Data Collection and Tracking Forms (2 copies to SWCF)

8. References

QAP 17-1 WIPP Quality Assurance Records Source Requirements

QAP 19-1 WIPP Computer Software Requirements

Parsons, R.T.,1995, Software Verification Package *AIS-RMD* WPO 23487, Sandia National Laboratories, Albuquerque, NM.

WIPP Waste Isolation Pilot Plant			Title: AIS-RMD Data Collection and Tracking Form			TOP 558 Revision 0 TOP Page 6 of 6 Form Page Number ____ of ____		
Team _____			SNL Approval _____			Q.A. _____		
CALIBRATION INFORMATION								
501 J Programmable Voltage Standard S/N _____ Cal Due Date _____					Hewlett Packard 3456A Multimeter S/N _____ Cal Due Date _____			
DATA FILE INFORMATION								
Date Data Retrieved _____					System Time _____			
Data File Name: _____					Number of Records _____			
Present Time _____			Next Scan Time _____			Interval _____		
DISK TYPE								
System Data Disk			Backup Data Disk 1			Backup Data Disk 2		
DISK TRACKING INFORMATION								
Sent By			Sent To			Received By		
Name	Company	Date	Name	Company	Date	Signature		
Comments:								